<u>AMENDMENTS TO THE CLAIMS</u>

This listing of claims will replace all prior versions of claims in the application:

Listing of Claims:

1-24.   (Canceled).

25.   (Currently Amended) A <u>computer readable storage medium that facilitates</u> ~~computer implemented~~ collaborative filtering ~~system~~, comprising:

a personality type generator that analyzes known attributes relating to a user and calculates probabilities that the user has a personality type substantially similar to personality types of a plurality of disparate users, wherein the personality types of the plurality of disparate users are based at least in part upon attributes related to such users; ~~and~~

an attribute value predictor that predicts unknown attributes relating to the user based at least in part upon the calculated probability for each personality type, the attribute value predictor determining a set of values for each unknown attribute<u>;</u>

<u>a query cost-benefit analyzer that employs the determined set of values to minimize the number of explicit queries to the user while maximizing accuracy of a calculated personality probability; and</u>

<u>a database manager that employs the determined set of values to determine an entry of a database to prune such that the entry when removed has minimal effect on accuracy of prediction.</u>

26.   (Previously Presented) The system of claim 25, further comprising a recommendation facility that provides recommendations to the user based at least in part upon the predicted attributes.

27.   (Previously Presented) The system of claim 26, the recommendation facility weighs a cost of disturbing the user against a benefit of providing the user with the recommendation prior to providing the user with the recommendations.

28.   (Previously Presented) The system of claim 25, further comprising a query facility that requests an attribute from the user.

29.   (Previously Presented) The system of claim 28, the query facility weighs a cost of disturbing the user against a benefit of obtaining the attribute prior to requesting the attribute from the user.

30.   (Previously Presented) The system of claim 28, the query facility employs expected value of information in connection with requesting the attribute from the user.

31.   (Previously Presented) The system of claim 30, attributes are selectively requested from the user based upon one or more of a discriminatory value of information relating to the user and a consideration of a likelihood that the user is familiar with items being asked about given current uncertainty about the user.

32.   (Previously Presented) The system of claim 31, attributes are selectively requested from the user based upon a discriminatory value of the information, including an analysis of a consideration of a likelihood of different answers to a query given current uncertainty about the user.

33.   (Previously Presented) The system of claim 25, the personality types of the plurality of disparate users generated using at least known attributes relating to each of the plurality of disparate users.

34.   (Previously Presented) The system of claim 33, the known attributes relating to the plurality of disparate users is accessible from a data table.

35.   (Previously Presented) The system of claim 34, further comprising a pruning facility, the pruning facility employed to reduce a number of known attributes to consider when generating the personality types of the plurality of users.

36.   (Previously Presented) The system of claim 25, the known attributes relating to the user associated with a calculated variability.

37.   (Previously Presented) The system of claim 36, the variability is Gaussian.

38.   (Previously Presented) The system of claim 25, the personality types are at least partially defined by vectors, the vectors include attributes relating to the plurality of disparate users.

39.   (Previously Presented) The system of claim 38, the probabilities that the user has a personality type substantially similar to personality types of the plurality of disparate users are calculated at least partially by a frequency that the plurality of disparate users rate items according to the vectors.

40.   (Previously Presented) The system of claim 39, a number of occurrences that the disparate users rate items according to the vectors are explicitly counted.

41.   (Previously Presented) The system of claim 25, the personality type generator determines at least one probability that the user has a personality type substantially similar to any other personality type by employing the expression

$$\Pr\left(R_a^{true} = R_i \mid R_{a1} = x_1, ..R_{am} = x_m\right) \propto \Pr\left(R_{a1} = x_1 \mid R_{a1}^{true} = R_{i1}\right)..\Pr\left(R_{am} = x_m \mid R_{am}^{true} = R_{im}\right) \bullet \Pr(R_a^{true} = R_i) \text{ wh}$$

ere R_a^{true} is a vector of the user's internal preferences for one or more titles, R_i is a vector of a disparate user's ratings, R_a is a vector of the user's actual ratings, and x is a particular rating within R_i.

42.   (Previously Presented) The system of claim 41, wherein $\Pr\left(R_a^{true} = R_i\right)$ is assumed to be $\frac{1}{n}$, where n is a number of the disparate users.

43.   (Previously Presented) The system of claim 41, the attribute value predictor at least partially predicts unknown attributes relating to the user by employing the expression

$$\Pr\left(R_{aj} = x_j \mid R_{a1} = x_1, \ldots, R_{am} = x_m\right) = \sum_{i=1}^{n} \Pr\left(R_{aj} = x_j \mid R_a^{true} = R_i\right) \bullet \Pr\left(R_a^{true} = R_i \mid R_{a1} = x_1, \ldots R_{am} = x_m\right)$$

where j is an attribute that has not been rated by the user.

44.   (Previously Presented) The system claim 25, the personality generator employs a Bayesian Network to calculate the probabilities that the user has a personality type substantially similar to personality types of the plurality of disparate users.

45.   (Cancelled).

46.   (Previously Presented) The system of claim 25 residing on a server.

47.   (Previously Presented) The system of claim 25 accessed over a network.

48.   (Currently Amended) A method for providing recommendations to a user, comprising:
        collecting attributes from a user, the attributes relate to items accessible *via* a browser;
        calculating a probability that the user has a personality type substantially similar to a disparate user based at least in part upon the collected attributes and attributes related to the disparate user;
        generating a set of values for each attribute for the user based at least in part upon the calculated probability; ~~and~~
        recommending an item to a user based at least in part upon the generated attributes; and employing the generated set of values to at least one of minimize the number of explicit queries to the user while maximizing the accuracy of the recommendations or determining an entry of a database to prune such that the entry when removed has minimal effect on accuracy of the recommendations.

49.   (Previously Presented) The method of claim 48, further comprising selectively requesting attributes from the user based upon a value of obtaining the information.

50.   (Previously Presented) The method of claim 49, further comprising selectively requesting attributes from the user based upon a use of expected value of information.

51.   (Previously Presented) The method of claim 50, further comprising selectively requesting attributes from the user based upon one or more of a discriminatory value of information relating to the user and a consideration of a likelihood that the user is familiar with items being asked about given current uncertainty about the user.

52.   (Previously Presented) The method of claim 51, further comprising selectively requesting attributes from the user based upon a discriminatory value of the information, including an analysis of a consideration of a likelihood of different answers to a query given current uncertainty about the user.

53.   (Previously Presented) The method of claim 48, one or more of the attributes being ratings relating to items.

54.   (Previously Presented) The method of claim 53, the items being one or more of video content, textual content, audio content, image content, multi-media content, a service, a consumer good, a business good, clothing, and a financial instrument.

55.   (Previously Presented) The method of claim 48, further comprising calculating a plurality of probabilities that the user has a personality type substantially similar to a plurality of disparate users based at least in part upon the collected attributes and attributes related to the disparate users.

56.   (Previously Presented) The method of claim 48, further comprising selectively reducing a number of attributes to consider when calculating the probability that the user has a personality type substantially similar to the disparate user.

57.   (Previously Presented) The method of claim 48, further comprising employing a Bayesian network in connection with recommending the item to the user.

58.   (Currently Amended) A system that facilitates Internet searching, comprising:

        means for collecting attributes relating to an entity;

        means for comparing the collected attributes with attributes related to a plurality
of disparate entities;

        means for calculating probabilities that the entity has a personality type substantially
similar to a personality type of the disparate entities based at least in part upon the comparison;

        means for generating a set of new values for each attribute relating to the entity based at
least in part upon the calculated probabilities; and

        means for employing the generated set of values to at least one of minimize the number
of explicit queries to the user while maximizing the accuracy of a recommendation or
determining an entry of a database to prune such that the entry when removed has minimal effect
on accuracy of the recommendation.

59.   (Previously Presented) The system of claim 58, further comprising means for providing
the entity with a recommendation based at least in part upon the new attributes.